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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,699

09/30/2004

Masafumi Ide

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38834

7590

10/04/2006

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EXAMINER

TON, MINH TOAN T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/509,699

Applicant(s)

IDE, MASAFUMI

Examiner

Toan Ton

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al (US 5414540) in view of Sorin et al (US 6208774).

Patel discloses a switchable liquid crystal optical device comprising (see at least Figure 1): a spectroscope (e.g., 12) that separates an incoming light into spectral components; a liquid crystal optical switch (e.g., 24) that receives the spectral components separated by the spectroscope; and a lens system (e.g., 14) arranged between an incoming end and the spectroscope and/or between the spectroscope and the liquid crystal optical switch.

The use of a liquid crystal display device comprising polarizing beam splitter(s) is common and known in the art, wherein the such device comprises reflecting elements, liquid crystal cells, polarizing beam splitting element(s) for separating polarization of light for achieving advantages such as high light efficiency resulting in a brighter display. Sorin discloses a switchable liquid crystal display device comprising a polarizing beam splitting element. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ polarizing beam splitting element(s), as common and known in the art, for achieving advantages such as high light efficiency resulting in a brighter display.

Patel discloses the device comprising liquid crystal optical switch has a plurality of liquid crystal optical switch elements (e.g., 24, 26, 28) that are linearly arranged along the optical

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components separated by the spectroscope (see at least Figure 1 and its descriptions).

Patel discloses the device comprising the liquid crystal optical switch elements arranged in two dimensions in the line direction and in a direction at a right angle to the line direction (see at least Figure 1)

Both the claimed invention and Patel in view Sorin (PBS element) recite the same structural device.

Patel discloses the device comprising the liquid crystal optical switch elements (e.g., 24, 26, 28) send out the light, whose light intensity is inherently changed, into a direction different from an incoming direction (see at least Figure 1, lights in different directions).

2. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel in view Sorin as applied to claims 1-8 above, and further in view of Hirabayshi et al (US 5321539).

Hirabayshi discloses a liquid crystal display device comprising a photo detection element comprising photo diodes for detecting polarizing light beams transmitted through the liquid crystal wavelength-selective element. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a photo detection element in the device of Patel for advantages such properly detecting outgoing polarizing light beams.

The use of a photo detection element such as an optical spectrum analyzer appears at least to be an obvious variation (i.e., not patentably distinct) to the use of a photo detection element such as photo diode since it appears that either appears to be functional equivalent (e.g., serving similar function such as properly detecting outgoing polarizing light beams) to each other. Thus, the use of either photo detection element would have been at least obvious to one

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of ordinary skill in the art at the time the invention was made for achieving advantages such as properly detecting outgoing polarizing light beams.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 2, 2006


TOANTON
PRIMARY EXAMINER